

Express Mail Label No. EV667329282US

(09-04)  
Approved for use through 11/30/2005. OMB 0651-0055  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY  
and  
CORRESPONDENCE ADDRESS  
INDICATION FORM**

Application Number	To be assigned
Filing Date	June 10, 2005
First Named Inventor	Wayne D. Frisch
Title	Polarization-enhanced detector ..
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	112624.00089

I hereby appoint:

Practitioners associated with the Customer Number:

26707

OR

Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

The address associated with the above-mentioned Customer Number:

OR

The address associated with Customer Number:

OR

Firm or  
Individual Name:

Address:

City:

State:

Zip:

Country:

Telephone:

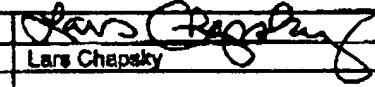
Fax:

I am the:

Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/08)

**SIGNATURE of Applicant or Assignee of Record**

Signature		Date	6/9/05
Name	Lars Chapeky	Telephone	480.308.0628
Title and Company			

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc. No. 1934610

Express Mail Label No. EV667329262US

(08-04)  
Approved for use through 11/30/2005. OMB 0651-0035U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY  
and  
CORRESPONDENCE ADDRESS  
INDICATION FORM**

Application Number	To be assigned
Filing Date	June 10, 2005
First Named Inventor	Wayne D. Frasch
Title	Polarization-enhanced detector ..
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	112624.00089

I hereby appoint:

 Practitioners associated with the Customer Number:

26707

OR

 Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

 The address associated with the above-mentioned Customer Number:

OR

 The address associated with Customer Number:

OR

 Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Fax

I am the:

 Applicant/Inventor.
 Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

## SIGNATURE of Applicant or Assignee of Record

Signature	Wayne D. Frasch	Date	6-8-05
Name	Wayne D. Frasch	Telephone	480-759-7001
Title and Company	Professor, Arizona State University		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

 \*Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-0199 and select option 2.

Doc. No. 1934602

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it contains a valid OMB control number. (06-06) Approved for use through 07/31/2006. OMB 0651-0032 U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

**DECLARATION FOR UTILITY OR  
DESIGN  
PATENT APPLICATION  
(37 CFR 1.63)**

Declaration  
Submitted  
With Initial  
Filing

OR

Declaration  
Submitted after Initial  
Filing (surcharge  
(37 CFR 1.16 (e))  
required)

Attorney Docket Number	112624.00089
First Named Inventor	Wayne D. Frasch
<b>COMPLETE IF KNOWN</b>	
Application Number	To be assigned
Filing Date	June 10, 2005
Art Unit	To be assigned
Examiner Name	To be assigned

I hereby declare that:

Each Inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the Inventor(s) named below to be the original and first Inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**POLARIZATION-ENHANCED DETECTOR WITH GOLD NANORODS FOR DETECTING  
NANOSCALE ROTATIONAL MOTION AND METHOD THEREFOR**

*(Title of the Invention)*

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY) 12/11/03 as United States Application Number or PCT International

Application Number PCT/US03/39435 and was amended on (MM/DD/YYYY)   (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	NO
PCT/US03/39435	PCT	12/11/2003	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing the form, call 1-800-PTO-9199 and select option 2.

1934600

## DECLARATION -- Utility or Design Patent Application

Direct all correspondence to:		<input checked="" type="checkbox"/> The address associated with Customer Number:	26707	OR <input type="checkbox"/> Correspondence address below
Name				
Address				
City		State		ZIP
Country		Telephone		Fax
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.				
NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any]) Wayne D.			Family Name or Surname Frasch	
Inventor's Signature				Date
Residence: City Phoenix	State Arizona	Country United States	Citizenship United States	
Mailing Address 15013 S. 24th Way				
City Phoenix	State Arizona	Zip 85048	Country United States	
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any]) Lars			Family Name or Surname Chapasky	
Inventor's Signature 				Date 6/9/05
Residence: City Tempe	State Arizona	Country United States	Citizenship United States	
Mailing Address 5063 S. Roosevelt Street				
City Tempe	State Arizona	Zip 85282	Country United States	
<input type="checkbox"/> Additional inventors or a legal representative are being named on the <u>supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.</u>				

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it contains a valid OMB control number.

**DECLARATION FOR UTILITY OR  
DESIGN  
PATENT APPLICATION  
(37 CFR 1.63)**

Declaration  
Submitted  
With Initial  
Filing

OR

Declaration  
Submitted after Initial  
Filing (surcharge  
(37 CFR 1.16 (e))  
required)

Attorney Docket Number	112624.00089
First Named Inventor	Wayne D. Frasch
<b>COMPLETE IF KNOWN</b>	
Application Number	To be assigned
Filing Date	June 10, 2005
Art Unit	To be assigned
Examiner Name	To be assigned

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**POLARIZATION-ENHANCED DETECTOR WITH GOLD NANORODS FOR DETECTING  
NANOSCALE ROTATIONAL MOTION AND METHOD THEREFOR**

(Title of the Invention)

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY) 12/11/03 as United States Application Number or PCT International

Application Number PCT/US03/39435 and was amended on (MM/DD/YYYY)   (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
PCT/US03/39435	PCT	12/11/2003	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing this form, call 1-800-PTO-9199 and select option 2.

1934600

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## DECLARATION — Utility or Design Patent Application

Direct all correspondence to:		<input checked="" type="checkbox"/> The address associated with Customer Number:	26707	OR <input type="checkbox"/> Correspondence address below
Name				
Address				
City		State		ZIP
Country		Telephone		Fax
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.				
NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any]) Wayne D.			Family Name or Surname Frasch	
Inventor's Signature 				Date 6-8-05
Residence: City Phoenix	State Arizona	Country United States	Citizenship United States	
Mailing Address 15013 S. 24th Way				
City Phoenix	State Arizona	Zip 85048	Country United States	
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any]) Lars			Family Name or Surname Chapsky	
Inventor's Signature				Date
Residence: City Tempe	State Arizona	Country United States	Citizenship United States	
Mailing Address 5063 S. Roosevelt Street				
City Tempe	State Arizona	Zip 85282	Country United States	
<input type="checkbox"/> Additional inventors or a legal representative are being named on the <u>      </u> supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.				